UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TENNESSEE AT GREENEVILLE

UNITED STATES OF AMERICA)	
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)	
v.)	No. 2:19-CR-14
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XIAORONG YOU)	

MEMORANDUM OPINION AND ORDER

This matter is before the Court prior to Defendant's sentencing. The parties dispute the amount of loss Defendant intended as the result of her criminal conduct, and this dispute must be resolved before the Court can sentence Defendant in this case. For the following reasons, the Court determines the applicable amount of loss in this case to be \$121,800,000 USD.

I. BACKGROUND

In paragraph 24 of Defendant's PSR, the Probation Office states that "[a] conservative total cost of developing trade secrets in this case [is] \$121.1 million. If the loss is more than \$65,000,000 but less than \$150,000,000 increase by 24 levels. USSG §2B1.1(b)(1)(M)." Both parties, however, disagree with using research and development costs as an estimate of loss.

The Government seeks a higher value of intended loss, based largely on representations made by the Defendant in grant applications before the Chinese government. The Government cites Defendant's Thousand Talent Plan Application ("TTP Application"), which was submitted to the Chinese government in June 2017. The Government contends that the TTP Application establishes the following: (1) Defendant understood global can-coatings sales to be approximately \$7.7B, with sales in China specifically accounting for \$2.9B, or 38% of the global market; (2) Defendant believed her new company would obtain a 3% to 5% market share with annual sales of

\$102.5M to \$131.7M from 2021-2023; (3) can coating production would eventually increase to sales of \$292.8M to \$351.4M annually from 2024-2027; (4) Defendant intended to earn not less than \$1.478B in revenue by selling into the global and Chinese markets between 2021 to 2027; and (5) Defendant intended to "break[] through both green and technical international trade barriers" to "earn a share of the global market," as well as "break the international monopoly [on can coatings]." [Doc. 392, at 6–11]. The Government accordingly calculates that Defendant's future sales were estimated to be between \$1.48B to \$1.8B. [*Id.* at 9]. Ultimately, however, the Government argues for a "conservative" estimated loss number based on representations made in a PowerPoint that the Defendant would pay approximately \$220M in taxes at an estimated 100% tax rate to the Chinese government between 2021 and 2027. [*Id.* at 17–19].

Defendant, on the other hand, argues that the Government has failed to prove any amount of intended loss by a preponderance of the evidence. [See Doc. 400]. She points out that there has been no independent, unbiased testimony regarding the value of the trade secrets in this case. Rather, the Government called upon employees of the victim companies to testify. Additionally, Defendant argues that: (1) she never disclosed or shared the trade secret information; and (2) the grant applications to the Chinese government are not indicative of purposeful intent to harm the seven victim companies because they are puffery and ambitious speculation.

II. LEGAL STANDARD

U.S.S.G. § 2B1.1(b)(1) enhances fraud sentences based on "loss." Under a Guidelines comment, "intended loss" is defined as "the pecuniary harm that the defendant purposely sought to inflict," and "includes intended pecuniary harm that would have been impossible or unlikely to

occur[.]" See U.S.S.G. § 2B1.1 cmt. n.3(A)(ii).¹ In creating this definition, the Commission adopted the interpretation of "intended loss" articulated in *United States v. Manatau*, 647 F.3d 1048 (10th Cir. 2011). U.S.S.C., Amendments to the Sentencing Guidelines (Apr. 30, 2015), at 24–25. There, the Tenth Circuit held that "[i]ntended loss' means the loss the defendant *purposely* sought to inflict" and therefore "does not mean a loss that the defendant merely *knew* would result from his scheme or a loss he might have *possibly and potentially* contemplated." 647 F.3d at 1050 (emphasis in original).

Thus, courts in multiple circuits have found that in trade secrets cases, the "[i]ntended loss analysis, as the name suggests, turns upon how much loss the defendant actually intended to impose' on the victim, regardless of whether the loss actually materialized or was even possible." *United States v. Xue*, No. 16-22, 2020 U.S. Dist. LEXIS 173410, at *40–*42 (E.D. Pa. Sept. 22, 2020) (citing *United States v. Pu*, 814 F.3d 818, 824 (7th Cir. 2016)) (citations partially omitted).

"For purposes of U.S.S.G. § 2B1.1, the government bears the burden to prove the amount of loss—actual or intended—by a preponderance of the evidence." *United States v. Riccardi*, 989 F.3d 476, 481 (6th Cir. 2021). In the Sixth Circuit, district courts need not reach an exact figure for the loss a victim suffered or the amount of harm a defendant caused or intended to cause; a "reasonable estimate" will do. *United States v. Howley*, 707 F.3d 575, 582 (6th Cir. 2013) (citing U.S.S.G. § 2B1.1, cmt. n.3(C)). The Sixth Circuit will only reverse "clearly erroneous estimates." *Id.* (citing *United States v. Warshak*, 631 F.3d 266, 328 (6th Cir. 2010)).

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¹ The Third Circuit has noted that "[o]nly this comment, not the Guidelines' text, says that defendants can be sentenced based on the losses they intended. By interpreting 'loss' to mean intended loss, it is possible that the commentary sweeps more broadly than the plain text of the Guideline." *United States v. Kirschner*, 995 F.3d 327, 333 (3d Cir. 2021) (citing *United States v. Nasir*, 982 F.3d 144, 177 (3d Cir. 2020) (en banc) (Bibas, J., concurring)).

In estimating a loss, a comment to the Guidelines states that "the estimate of the loss shall be based on available information, taking into account, as appropriate and practicable under the circumstances, factors such as the following: (i) The fair market value of the property unlawfully taken, copied, or destroyed; or, if the fair market value is impracticable to determine or inadequately measures the harm, the cost to the victim of replacing that property; (ii) in the case of proprietary information (e.g., trade secrets), the cost of developing that information or the reduction in the value of that information that resulted from the offense; (iii) the cost of repairs to damaged property; (iv) the approximate number of victims multiplied by the average loss to each victim; (v) the reduction that resulted from the offense in the value of equity securities or other corporate assets; and (vi) more general factors, such as the scope and duration of the offense and revenues generated by similar operations." U.S.S.G. § 2B1.1 cmt. n.3(C)(i)–(ii).

III. ANALYSIS

a. Sixth Circuit Precedent Requires This Court to Find an Amount of Loss

In *United States v. Howley*, the Sixth Circuit vacated two defendants' sentences and remanded to the district court for further proceedings to determine an intended loss amount. 707 F.3d at 583. The Court's main issue with the district court's decision was that the district court concluded that there was no calculable intended loss in the case:

Without further explanation, the court found that the government had failed to establish any loss at all, notwithstanding beyond-a-reasonable-doubt convictions premised on the reasonable assumption that the Goodyear design—the underlying trade secret—was worth something. Nor was the district court's no-loss finding insignificant. Even the smallest loss the government argued for, \$305,000, would have yielded a guidelines range of 37 to 46 months in prison. In the absence of any loss, Roberts and Howley faced a guidelines range of 4 to 10 months. The district court imposed sentences of four months of home confinement, 150 hours of community service and four years of probation for each defendant.

The amount of loss was a contested and high-stakes factual question, making it imperative that the district court "engage[] in a more thorough explication

of its calculation." Without more, the district court's zero-loss finding seems at odds with the defendants' convictions for stealing property that had "independent economic value." If the district court were dissatisfied with the government's estimates, it could have generated its own. The court, for instance, could have accepted the defendants' argument that they intended to deprive Goodyear only of part of the value of the swabbing-down machine, not the full value, and arrived at an estimate that represented a percentage of the machine's total cost. Or it could have asked the parties to present additional evidence. The ultimate decision is up to the district court, which is in a "unique position," to assess the losses [the defendants] intended to cause. All we require is that the court provide reasons for its choice.

On remand, the district court need not be exacting. The Guidelines require only a "reasonable" estimate of actual or intended loss within broad ranges. But the court must at least provide an estimate and reasons for it. Nor need a loss estimate above zero necessarily tie a sentencing judge's hands. Yes, all else being equal, an estimate of a substantial loss necessarily will increase the guidelines range, but it will not override the district court's duty to exercise discretion in deciding what sentences to impose on the defendants, whether within the guidelines range or outside of it.

Id. at 582–83 (emphasis added).

While the Sixth Circuit has not directed this Court to apply any particular methodology to calculate an amount of intended loss, one thing is clear: the Court must reach a non-zero determination on the amount. Indeed, when the *Howley* case was remanded back to the district court for further consideration, Judge Phillips noted the following during re-sentencing:

Based on the parties' submissions and the testimony presented today, the Court finds that the most reasonable estimate of the loss in this case is the research and development cost to Goodyear, which the Court will determine the amount very shortly.

. . .

Consequently, it's almost impossible for the Court to come up with an accurate determination as to the amount of loss to Goodyear.

The Sixth Circuit has indicated that we do not have to come up with an exact amount. The Sixth Circuit stated that, "On remand, the district court need not be exacting. The guidelines require only a reasonable estimate of actual or intended loss within broad ranges. Therefore, it's the determination of the Court that the amount of loss occasioned by Goodyear is between 200,000 or \$500,000."

[Doc. 225 in Case No. 3:08-cr-175, at 70–71 (emphasis added)]. Accordingly, the Court must reject Defendant's argument that the loss amount in this case should be zero.

b. The Court Will Determine a Loss Amount Based on Anticipated Profits

The Court agrees with the parties that probation's estimation of intended loss, based on the cost of development of the trade secrets at issue, is inappropriate. The Court is mindful of the fact that it must determine an amount of loss that Defendant ""purposely sought to inflict," rather than a loss Defendant "merely knew would result from h[er] scheme or a loss [s]he might have possibly and potentially contemplated." Manatau, 647 F.3d at 1050 (emphasis in original); U.S.S.C., Amendments to the Sentencing Guidelines (Apr. 30, 2015), at 24–25. Evidence in the record suggests that additional work would still be needed to develop a competitive product based on the misappropriated trade secrets, and based on the representations made in her grant applications, Defendant clearly intended to enter the monopolistic can-coating market and make a profit. Accordingly, a finding that Defendant intended to cause the victim companies a dollar-for-dollar loss equal to the amount of research and development funds expended in developing the victim companies' BPA-free coatings is improper here. In reaching a determination of intended loss, the Court will rely on other "available information" established during trial, as is permitted by the Guidelines.²

The Court agrees with the Government that in a monopoly market such as this, anticipated profits are the most reasonable measure of loss. Defendant readily acknowledged in her grant application that the current can-coating industry is, indeed, a monopoly run by the victim

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² ""[O]f course,' in analyzing the defendant's *mens rea* the district court 'is free . . . to make reasonable inferences about the defendant's mental state from the available facts." *United States v. Shi*, No. 17-cr-110, 2019 U.S. Dist. LEXIS 218106, at *5 (D.D.C. Dec. 17, 2019) (citing *Manatau*, 647 F.3d at 1056).

companies that she "anticipated to break." [Doc. 392, at 12]. Therefore, it follows that whatever existing market share Defendant intended to gain, she intended to take it from a victim company. After all, Defendant can only gain existing market share if the victim companies forming the monopoly lose that amount of the market. However, the Court also agrees with Defendant that the profit and tax estimates put forth in materials such as presentations or grant applications are likely inflated as a result of puffery and based on speculation. The Court is bound to determine the amount of loss Defendant intended to inflict, not an amount of loss she "might have *possibly and potentially* contemplated." *Manatau*, 647 F.3d at 1050 (emphasis in original). Therefore, the Court rejects the Government's proffered value of intended loss, based on projected tax payments to the Chinese government, as well. To calculate the Defendant's intended amount of loss, the Court must look elsewhere.

It is important to remember that the trade secrets at issue involved BPA-free coatings, which have not been adopted universally, and there is no indication in the record that they will be adopted universally in the future. [Doc. 309, at 38–40; Doc. 314, at 94–95]. Dan Leschnik, Global Technical Manager for Akzo-Nobel, testified that AkzoNobel has approximately 50% of the global market share for internal can coatings, and approximately 60% to 65% of that same market specifically in China. [Doc. 309, at 14, 46]. However, Mr. Leschnik also testified that AkzoNobel's sales in China were "99 percent BPA and 1 percent BPA-free" at the time of trial. [Doc. 310, at 15]. So, despite having 60 to 65% of the Chinese market, only 1% of AkzoNobel's sales there involved BPA-free coating technologies—the trade secrets at issue in this case. David Bem, Chief Technology Officer at PPG Industries, further testified that PPG readily sold BPA coatings in China but had only begun to make BPA-free sales in the last twelve months as of the time of trial. [Doc. 314, at 95].

Further, testimony at trial showed that while there are approximately 60 billion cans in the Chinese market, approximately 60% of those cans are consumed by local, state-owned beer companies. [Doc. 309, at 74]. Typically, global brands prefer to buy from global can makers, and global can makers prefer to buy their coatings from global suppliers, like the victim companies in this case. [*Id.* at 73–74]. However, Chinese state-owned can makers would likely prefer to buy coatings from Chinese suppliers, were they available. [*Id.* at 63–64, 76; Doc. 341, at 16; Doc. 342, at 17].

Calculations with respect to the portion of the global market share Defendant intended to take are too speculative. The only information the Court has to this effect is that Defendant reported the total value of the can-coating market to be over \$7 billion dollars annually in her TTP Application, and her projections anticipated that her new company would take 3% to 5% of the market share. As explained before, the Court finds this projection unreliable, as it is likely the result of puffery and speculation intended to entice the Chinese government into issuing a grant to Defendant and her co-applicants. Further, the Court is not aware of information available in the record regarding global sales of BPA-free versus BPA can coatings, or more importantly, how much of Defendant's intended total gains in market share would come from the global market versus the Chinese market specifically.

However, the Court does have information available in order to estimate Defendant's intended gains in the Chinese market. Based on the testimony of Dan Leschnik, the Court finds it is reasonable to assume that a conservative percentage of the existing market share in China for BPA-free coating sales would be 1% of the total market. Defendant's stated intent was to "fill the gap in Asia," which includes the Chinese market for can coatings. As previously discussed, due to the monopolistic nature of the market, Defendant could only gain existing market share in China

by taking it from one of the victim companies. Therefore, it follows that Defendant's intended gains in the Chinese market must be equivalent to the loss she intended to one or more of the victim companies.

The Court cannot attempt to guess how much of the can-coating market, in China or otherwise, will eventually shift to BPA-free coatings, or whether the can-coating market will grow further as a whole. However, the Court can determine a baseline for Defendant's intended gains in the Chinese market based on the state of the market that existed at the time she was looking to set up her own operation in China. The total Chinese market for can coatings is estimated at \$2.9 billion USD annually. If 60% of can makers in the Chinese market are Chinese, then local-owned Chinese purchasing power for can coatings represents \$1.74 billion USD of the Chinese market. As previously established, these businesses would likely prefer to buy from a domestic coating manufacturer, of which Defendant would have been the first of her kind.

Of that \$1.74 billion USD in purchasing power, however, only 1% of sales in the Chinese market as it existed around the time Defendant sought to enter it were for BPA-free coatings. This means that the total available amount of existing market for BPA-free coating sales is only \$17.4 million USD annually. Therefore, if Defendant were to "fill the gap in Asia" and absorb all purchases of BPA-free coatings from Chinese-owned can makers, she would stand to bring in sales of \$17.4 million USD a year on the back of the trade secrets she misappropriated. Over an estimated seven years of profit, from 2021 to 2027, this would lead to a sales total of \$121.8 million USD.

There are, of course, assumptions being made in this calculation. One is that the demand for BPA-free coatings in the Chinese market will neither grow nor shrink. Another is that, as a local can-coating manufacturer, Defendant would in fact absorb all sales from Chinese-owned can

makers. There is also no way to guarantee that any Chinese can manufacturer currently accounts

for purchases of BPA-free coating in China, or that to the extent it exists, such demand will

continue in the future. However, district courts need not reach an exact figure for the amount of

harm a defendant caused or intended to cause; in fact, the Court finds that such an exact calculation

would be impossible in this case. Thankfully for this Court, a "reasonable estimate" of intended

losses will do. Howley, 707 F.3d at 582 (6th Cir. 2013). The Court finds that based on available

information, including Defendant's intent to gain existing market share in a monopoly, and as

established by a preponderance of the evidence, \$121.8 million USD is a conservative and

reasonable estimate of Defendant's intended losses to the victim companies in order to "break" the

can-coating monopoly and "fill the gap in Asia."

IV. CONCLUSION

The Court finds that Defendant's intended losses in this case are \$121,800,000 USD. If the

loss is more than \$65,000,000 but less than \$150,000,000 increase by 24 levels. USSG

§2B1.1(b)(1)(M).

So ordered.

ENTER:

s/J. RONNIE GREER

UNITED STATES DISTRICT JUDGE